

## **REMARKS**

### **Introduction**

Claims 1, 2, 9, and 11 are pending. No claims have been amended and claim 12 has been added. Support for the new claim can be found throughout the specification, for example, in the claims as filed. No new matter has been added in this reply.

Claims 3-8 and 10 remain cancelled without prejudice to the subject matter disclosed therein. Applicant expressly reserves the right to pursue the subject matter of the cancelled claims in this application or in another application.

### **Rejection under 35 U.S.C. §103**

The Examiner has rejected claims 1, 2, 9, and 11 under 35 U.S.C. §103(a) as allegedly being obvious in view of Tanaka et al. (1998), Tanaka et al. (2000) and Matejtschuk et al. See Office Action at pg. 2 for full citations. Applicant traverses.

The combination of references does not disclose or fairly suggest all the features of the claims. The claims are directed to methods of manufacturing an albumin enriched fraction having a reduced prekallikrein activator (PKA) content involving the following: (a) reconstitution of paste V (Cohn fractionation) to form a first fraction; (b) concentrating the first fraction obtained in step (a) to obtain a concentrated fraction; (c) pasteurizing the concentrated fraction obtained in step (b) for a time period of at least nine hours at a temperature of 58°C to 65°C to obtain a pasteurized fraction; (d) filling vials with the pasteurized fraction; and incubating the vials for 10 days at 30°C to 32°C or for four weeks at 20°C to 25°C to obtain an albumin enriched fraction having a PKA content of less than 12 IU/ml. As discussed below, the references cited by the Examiner disclose and advocate the benefits of chromatography based processes involving different methods than those claimed.

Tanaka et al. (1998) does not disclose or fairly suggest the claimed method and instead discloses a purification process of human albumin by applying liquid chromatography to the supernatant of Cohn fraction IV. See, e.g., pg. 1385, left column. For example, Tanaka et al. use

the supernatant of Cohn IV as starting material for chromatographic purification and gel filtration whereas the claims use Cohn V paste (which is a precipitate derived from the Cohn IV supernatant)<sup>1</sup>. Thus the claimed methods use a different, more pure starting material than in Tanaka et al. Further, Tanaka et al. does not disclose a precipitation step. Moreover, the claimed methods do not require a chromatographic step or any gel filtration as Tanaka et al. teaches.

The second Tanaka et al. reference does not disclose the claimed methods and cannot remedy the deficiencies of Tanaka et al. (1998). Tanaka et al. (2000) refer to the **preparation of IgG from Cohn pastes I+II+III or II+III** by means of ion exchange chromatography (performed on Q-Sepharose FF (anion exchange chromatography) and CM-Sepharose FF (cation exchange chromatography)) and gel filtration (Sepharyl 5-300 HR). See, e.g., the Abstract (emphasis added). The incubation mentioned in the abstract is performed under the influence of pepsin at pH 4.0 at 35°C for 18h which is distinct from the claims where the incubation is performed at different temperatures, using different time-frames, without the use of an enzyme. Moreover, the claims are directed to a **prekallikrein activator depleted plasma derived albumin fraction**, which is a different product, processed from a different source, by a completely different process, than those taught by Tanaka et al. (2000). Thus, Tanaka et al. (2000), even in view of Tanaka et al. (1998), does not teach the claimed methods nor does it suggest the claimed methods.

The Matejtschuk et al. document does not remedy the deficiencies of the combination of the two Tanaka et al. documents. Matejtschuk et al. discloses various methods known for the preparation of human albumin solutions (see, e.g., fig. 1, pgs. 888-891) among which are three processes comprising at least one chromatographic step (Zenalab, CSL Albumex, Bergloff) and three processes without any chromatographic step (Hink, Cohn, Kistler & Nitschmann). As discussed above, the claimed invention does not require chromatography. The fractionation processes of Cohn and Kistler & Nitschmann purport to disclose Fraction V, filling and pasteurization but there is no indication of any incubation as the claims require or that the claimed prekallikrein activator content could be achieved using these processes. The intermediate of Hink's 30% EtOH fractionation is not comparable to the fraction V of the claimed methods. Therefore,

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<sup>1</sup> See, e.g., Matejtschuk et al., pg. 890, right column above "Chromatographic purification."

even in view of the processes without a chromatographic step in Matejtschuk et al., this document does not teach all the features of the claims and does not remedy the deficiencies of the two Tanaka et al. documents.

Further, the Matejtschuk et al. document teaches away from the claimed methods. For example, a person skilled in the art wishing to produce a human albumin solution with a low prekallikrein activator content and provided with the knowledge of the cited documents would see in Matejtschuk et al. that there are several preparation methods available. Upon closer review, the presented preparation methods include: Cold ethanol fractionation (Cohn, Kistler & Nitschmann); Chromatographic purification (Bergloff); and other methods (Zenalab and CSL Albumex) that involve combinations of cold ethanol fractionation and chromatographic purification.

Matejtschuk et al. would lead one to a chromatographic process when it states that "[t]he appeal of chromatographic processing of plasma over cold ethanol fractionation in principle is its ease of automation, the relatively inexpensive plant required, and the ease of sanitizing and maintaining a Good Manufacturing Practice environment." See pg. 891 (emphasis added). The document continues stating "[t]he process is less damaging to the protein than ethanol precipitation, and the concentration of aggregation resulting from processing is minimized. See pg. 891. The yield of albumin is also generally higher by chromatographic methods (80- 85% yield at >98% purity) than by cold ethanol precipitation (typically 60-70% yield and a 95% pure product)." See pg. 891. Thus, one of skill in the art reading Matejtschuk et al. would be lead away from an ethanol fractionation process, such as the claimed methods, because Matejtschuk et al. teaches chromatographic processes are less damaging to the protein, give higher protein yields, and reduce protein aggregation.

For at least the reasons above, the references cited by the Examiner simply do not teach the claimed methods and instead lead one of skill in the art to use chromatographic methods to achieve the desired result. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103(a) be withdrawn.

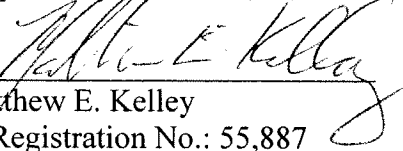
**CONCLUSION**

Applicant believes that the present application is in condition for allowance. Accordingly, Applicant requests that the Examiner issue a Notice of Allowance indicating the allowability of the claims and that the application be passed to issue. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

The Commissioner is authorized to charge any deficiency in any patent application processing fees pursuant to 37 CFR §1.17, including extension of time fees pursuant to 37 CFR §1.17(a)-(d), associated with this communication and to credit any excess payment to Deposit Account No. 22-0261.

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